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IC Project: W19 Nuclear Event Yearly Report Slides

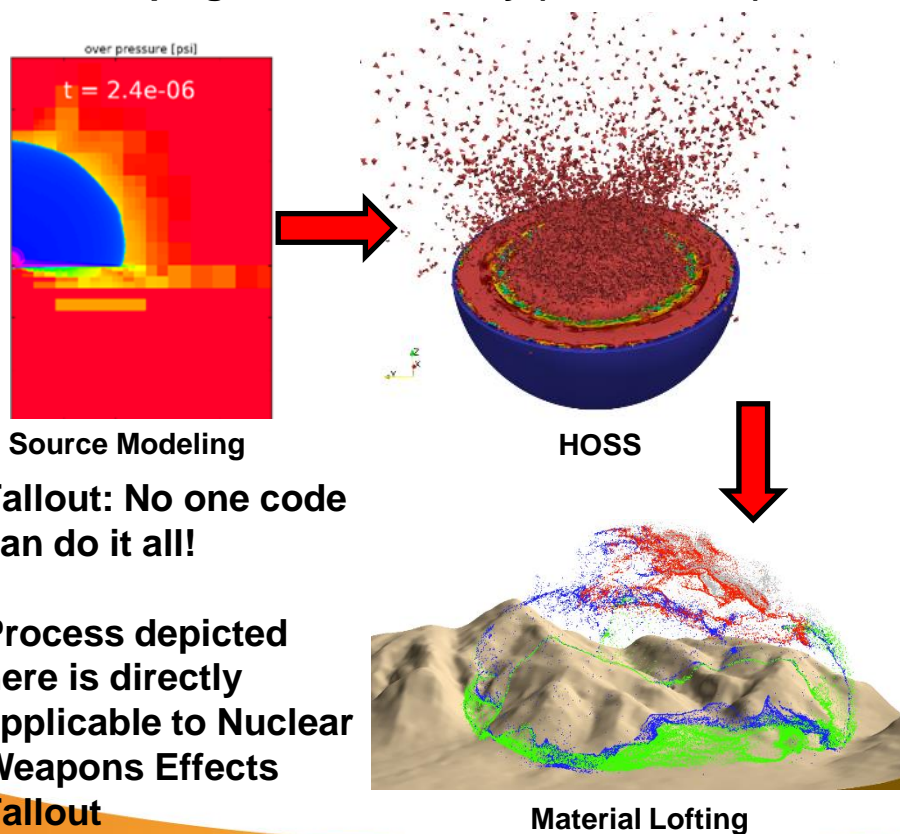
E.E. Knight and E. Rougier

31 March 2020

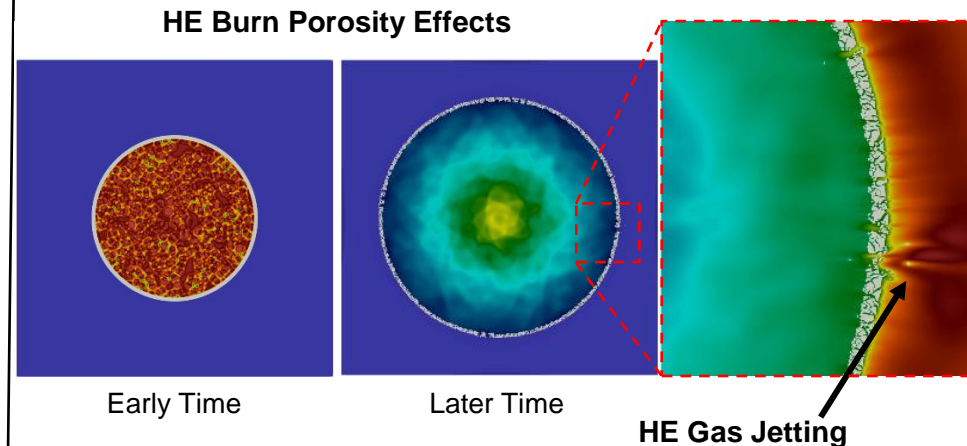
IC Project: W19 Nuclear Event HOSS (Hybrid Optimization Software Suite)

Application spaces for HOSS range from Underground Nuclear Event test containment, hypervelocity impact, earthquake faulting, hydraulic fracturing, etc. while other applications such as Survivability (lofted dust), High Explosive aging and performance, Nuclear Weapons Effects (cratering, facility defeat, Non-Ideal-Air-Blast pyroclastic flow), and weapons penetration affect weapon's mission spaces.

Campaign 7: Survivability (Lofted Dust)



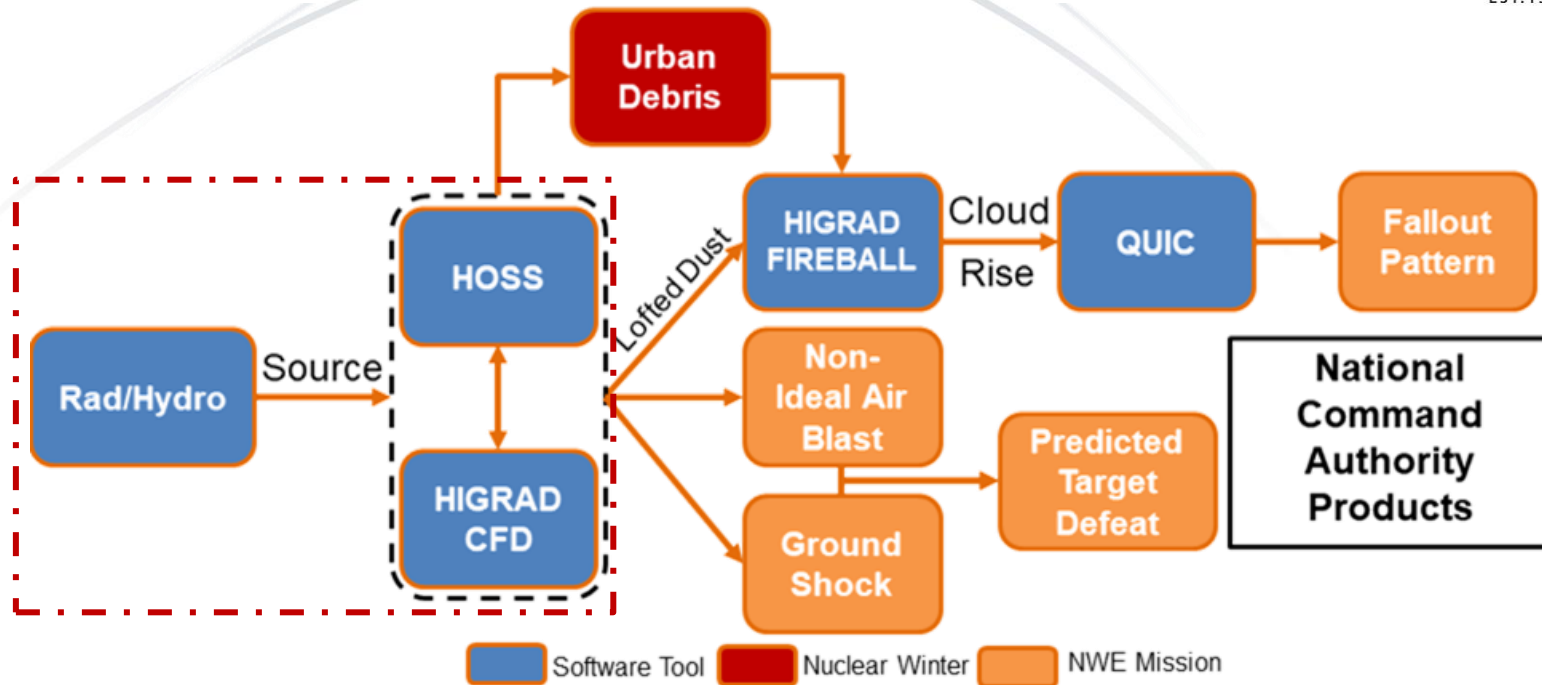
Alternative Stockpile Assessment Tool High Explosive (HE) Sphere Performance



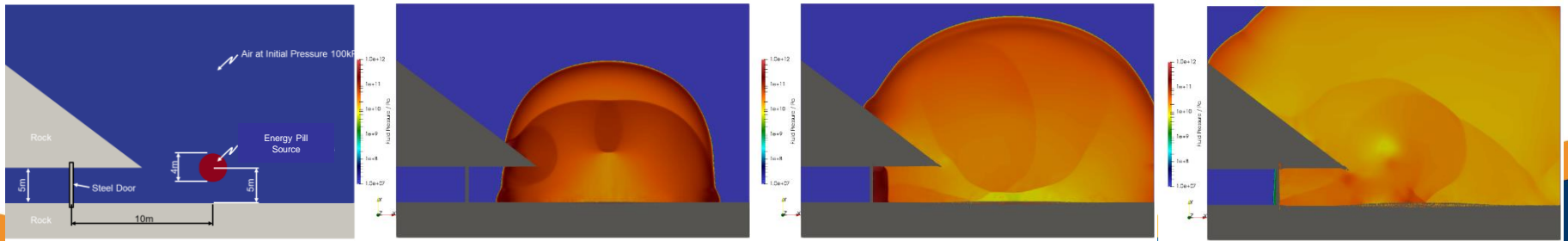
HOSS FSIS (Fluid-Solid-Interaction-Solver) capabilities, created for Nuclear Weapons Effects analysis are easily extendable to other pertinent analysis arenas such as High Explosive performance.

IC Project: W19 Nuclear Event

HOSS (Hybrid Optimization Software Suite)



LANL researchers are well underway to create a world class first principle physics-based (2-way coupling) Nuclear Weapons Effects and Stockpile Assessment Analysis tool.



HOSS FSIS High Energy Source 5m HoB